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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------------|------------------|
| 09/760,426 | 01/12/2001 | David J. Legare | 102P013 | 2329 |
| 28264 | 7590 | 11/07/2003 | | |
| MICHAEL P. WILLIAMS BOND, SCHOENECK & KING, PLLC ONE LINCOLN CENTER SYRACUSE, NY 13202 | | | EXAMINER CHEVALIER, ALICIA ANN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1772 | |

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/760,426

Applicant(s)

LEGARE, DAVID J.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 5, 13 and 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 9 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 102 and 103 rejections of record in paper #9 (*mailed May 15, 2003*), pages 2-7, paragraphs #2-9 have been withdrawn due to Applicant's amendments and arguments in paper #11 (*filed August 18, 2003*).

NEW REJECTIONS

2. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 103

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugahara et al (4,018,616) in view of Shodai et al. (3,793,055) or Ishida et al. (3,622,732).

Sugahara discloses a water glass composition used of production of various molded articles, such as walls, doors, roofs etc. (col. 13, lines 46-60).

Regarding claim 1, Sugahara discloses a fire protective composition useful in walls comprising water glass composed of silicate solution that is about 40% solids, 60% water, and having a SiO₂:Na₂O ratio in the range of about 2:1 to 4:1, specifically 3.5:1 to 3.75:1 (*col. 10, lines 39-60 and col. 12, lines 43-58*), polyvalent metal, specifically magnesium chloride (*col. 33, lines 63-64*), and an agent for binding free water, specifically calcium oxide (*col. 12, lines 31-37*).

Sugahara discloses the claimed invention except that the composition comprises calcium chloride instead of magnesium chloride. Shodai and Ishida show that calcium chloride and magnesium chloride are equivalent polyvalent metal materials known in the art. Therefore, because these two polyvalent metal materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute calcium chloride for magnesium chloride. See Shodai col. 3, line 65 bridging col. 4, line 4 and Ishida col. 1, line 65 bridging col. 2, line 11.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugahara et al (4,018,616) in view of Shodai et al. (3,793,055) or Ishida et al. (3,622,732) as applied to claim 1 above, and further in view of Blount (4,291,154).

The combination of Sugahara and Shodai or Ishida discloses all the limitations of the instant claimed invention except that the composition further comprises dibasic sodium phosphate.

Sugahara disclose using a phosphate curing agent mainly of silicon polyphosphate or its alkali salt (*col. 7, lines 18-20*).

Blount discloses a fireproof composition comprising water glass cured with disodium phosphate (dibasic sodium phosphate) to help lower and neutralize the pH level (*col. 13, lines 23-45*).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use dibasic sodium phosphate as the curing agent because it would help lower the and neutralize the pH level. One of ordinary skill in the art would be motivated to have a neutral pH because it would make the composition less flammable.

Art Unit: 1772

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Sugahara et al (4,018,616), and Shodai et al. (3,793,055) or Ishida et al. (3,622,732).

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam (*regarding claim 4*), and an inner layer of phase conversion material (*regarding claim 2*), see figure 1. The phase conversion material can contain sodium silicate water glass and a glauber salt (col. 3, lines 32-41). Regarding claim 3, the outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and wicking agent.

Regarding claim 1, Sugahara discloses a fire protective composition useful in walls comprising water glass composed of silicate solution that is about 40% solids, 60% water, and having a SiO₂:Na₂O ratio in the range of about 2:1 to 4:1, specifically 3.5:1 to 3.75:1 (*col. 10, lines 39-60 and col. 12, lines 43-58*), polyvalent metal, specifically magnesium chloride (*col. 33, lines 63-64*), and an agent for binding free water, specifically calcium oxide (*col. 12, lines 31-37*).

Sugahara discloses the claimed invention except that the composition comprises calcium chloride instead of magnesium chloride. Shodai and Ishida show that calcium chloride and magnesium chloride are equivalent polyvalent metal materials known in the art. Therefore, because these two polyvalent metal materials were art-recognized equivalents at the time the

Art Unit: 1772

invention was made, one of ordinary skill in the art would have found it obvious to substitute calcium chloride for magnesium chloride. See Shodai col. 3, line 65 bridging col. 4, line 4 and Ishida col. 1, line 65 bridging col. 2, line 11.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the composition of Sugahara and Shodai or Ishida as the outer layer of Kallstrom because of it's improved flame resistance.

6. Claims 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallstrom (EP0222720A2) in view of Sugahara et al (4,018,616), and Shodai et al. (3,793,055) or Ishida et al. (3,622,732) and Blount (4,291,154).

Kallstrom discloses a fire resistant wall element comprising outer layer phase conversion material, a layer of polyurethane foam (*regarding claim 12*), and an inner layer of phase conversion material (*regarding claim 10*), see figure 1. The phase conversion material can contain sodium silicate water glass and a glauber salt (col. 3, lines 32-41). Regarding claim 11, the outer layer has a thickness of 30 mm (1.2 inch), the intermediate wall has a thickness of 20 mm (0.8 inch), and the inner layer has a thickness of 10 mm (.4 inch) (col. 5, line 64 to col. 6, line 7).

Kallstrom fails to disclose that the outside layer comprises water glass, calcium chloride, and dibasic sodium phosphate.

Regarding claim 7, Sugahara discloses a fire protective composition useful in walls comprising water glass composed of silicate solution that is about 40% solids, 60% water, and having a SiO₂:Na₂O ratio in the range of about 2:1 to 4:1, specifically 3.5:1 to 3.75:1 (*col. 10, lines 39-60 and col. 12, lines 43-58*), polyvalent metal, specifically magnesium chloride (*col. 33,*

Art Unit: 1772

lines 63-64), and an agent for binding free water, specifically calcium oxide (*col. 12, lines 31-37*).

Shodai and Ishida show that calcium chloride and magnesium chloride are equivalent polyvalent metal materials known in the art. Therefore, because these two polyvalent metal materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute calcium chloride for magnesium chloride. See Shodai col. 3, line 65 bridging col. 4, line 4 and Ishida col. 1, line 65 bridging col. 2, line 11.

Sugahara disclose using a phosphate curing agent mainly of silicon polyphosphate or its alkali salt (*col. 7, lines 18-20*).

Blount discloses a fireproof composition comprising water glass cured with disodium phosphate (dibasic sodium phosphate) to help lower and neutralize the pH level (*col. 13, lines 23-45*).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use dibasic sodium phosphate as the curing agent because it would help lower the and neutralize the pH level. One of ordinary skill in the art would be motivated to have a neutral pH because it would make the composition less flammable.

Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the composition of Sugahara and Shodai or Ishida and Blount as the outer layer of Kallstrom because of it's improved flame resistance.

Art Unit: 1772

Allowable Subject Matter

7. Claims 6, 8, 9, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments filed in paper #11 regarding the 35 U.S.C. 102 and 103 rejections of record have been considered but are moot since the rejections have been withdrawn.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays


If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9306. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

11/2/03




HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

11/3/03